



**TYPICAL CHARACTERISTICS
ON
PMD-IFCPL-60M-AMP-3U**

PMI MODEL NUMBER PMD-IFCPL-60M-AMP-3U IS AN IF COUPLER MODULE IN A 3U PXI FORM FACTOR. THE OPERATING FREQUENCY IS 60 MHz. A TEST SIGNAL AND 3 RF SIGNALS ARE INPUT ALLOWING FOR 3 OUTPUT SIGNALS. A 16 MHz BANDPASS FILTER IS INCLUDED IN EACH AMPLITUDE AND PHASE MATCHED PATH.



September 18, 2015

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Assembled By:
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Tested By:
Dave Durbin

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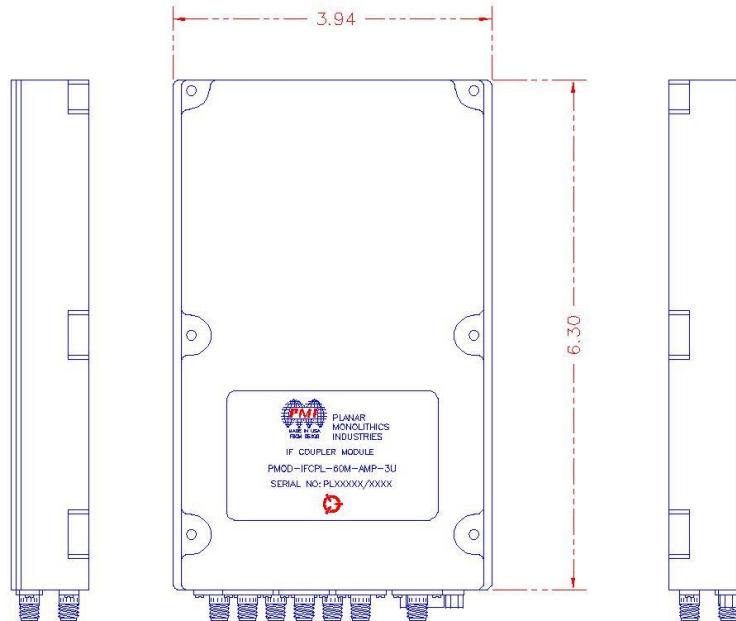


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DESCRIPTION:

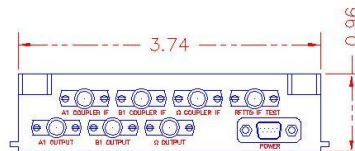
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	7/15/15	
	2	UPDATED	8/28/15	
A1		ECN # 15-0130	10/29/15	



MECHANICAL OUTLINE:

9-Pin Connector	Function
1	+15 VDC
2	GND
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC



ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XXX ±0.020
X.XXX ±0.010

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		REV.
DRAWN	<i>[Signature]</i>	7/15/15	PRODUCT FEATURE		
CHECKED			PMD-IFCPL-60M-AMP-3U		A1
ISSUED			60 MHz IF COUPLER MODULE		
			SIZE: A	FORM NO: 05XQ0	DWG NO: 27024721
			SCALE: N:S		SHEET: 2 OF 3



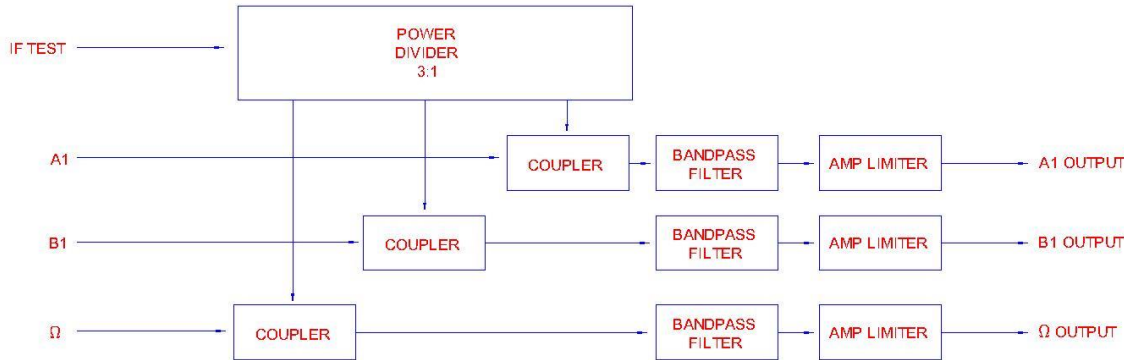
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	7/15/15	
	2	UPDATED	8/25/15	
A1		ECN # 15-0130	10/28/15	

BLOCK DIAGRAM:



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CHECKED			PMD-IFCPL-60M-AMP-3U	
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	A	05XQ0	27024721	A1
	SCALE	N:S	SHEET	3 OF 3

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**TYPICAL CHARACTERISTICS
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SUMMARY DATA

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
A1 Input Signal				
1	Frequency	60 MHz	60 MHz	
2	Maximum Input Power	-11 dBm	-11 dBm	
3	Maximum VSWR	1.5 : 1 @ IF	1.25 : 1	
B1 Input Signal				
4	Frequency	60 MHz	60 MHz	
5	Maximum Input Power	-11 dBm	-11 dBm	
6	Maximum VSWR	1.5 : 1 @ IF	1.28 : 1	
Ω Input Signal				
7	Frequency	60 MHz	60 MHz	
8	Maximum Input Power	-8 dBm	-8 dBm	
9	Maximum VSWR	1.5 : 1 @ IF	1.28 : 1	
IF Input Signal				
10	Frequency	60 MHz	60 MHz	
11	Maximum Input Power	-4 dBm	-4 dBm	
12	Maximum VSWR	1.5 : 1 @ IF	1.19 : 1	



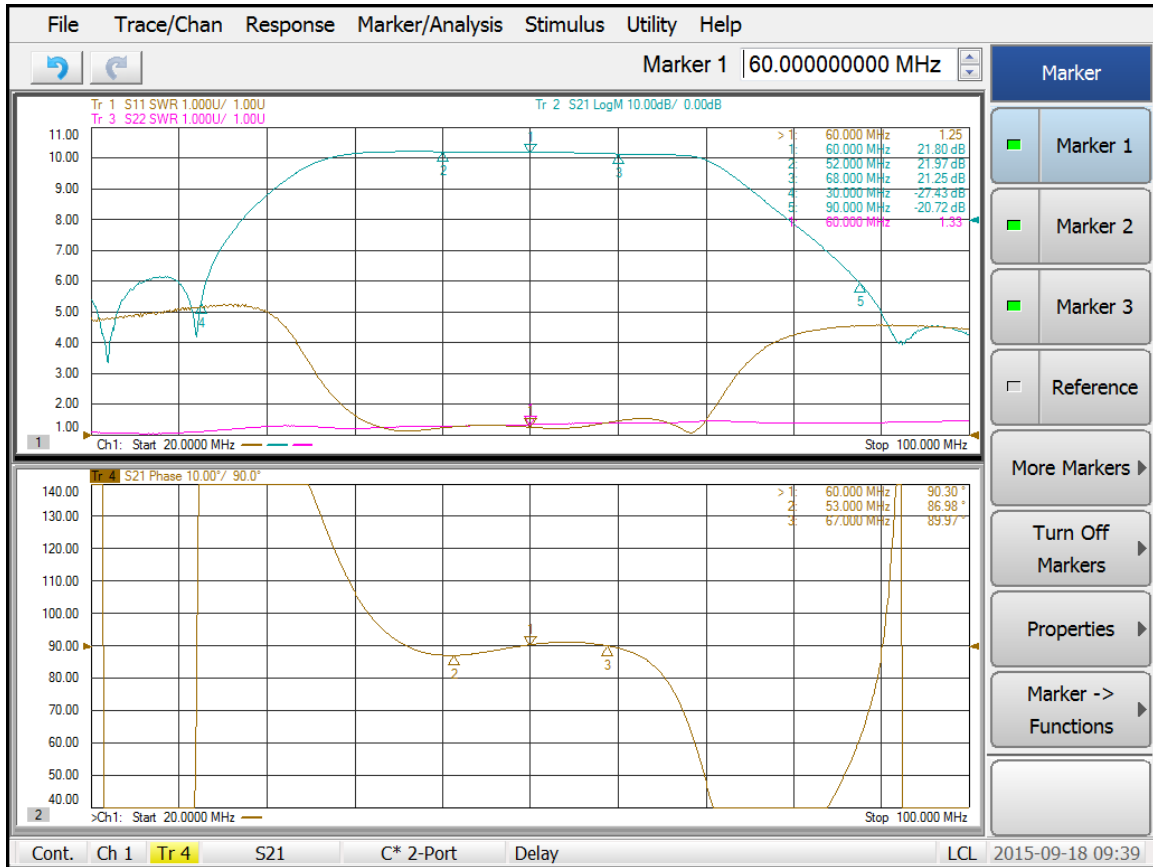
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A1,B1,Q Output Signals				
13	Maximum Power Out	+10 dBm	+8.32 dBm	
14	Full Scale Output Power	+8 dBm	+7.75 dBm	
15	Differential Amplitude Change	All 3 output gains within ± 0.5 dB @ IF	± 0.33 dB	
16	Differential Phase Change	$\pm 3^\circ$ for all frequencies within ± 3 MHz of IF over the 14 MHz range centered @ IF	$\pm 2.28^\circ$	
Bandpass Filters				
17	IF Frequency	60 MHz	60 MHz	
18	3 dB Bandwidth	± 8 MHz centered @ IF	$> \pm 8$ MHz	
19	Frequency Cutoff	-40 dBc ± 30 MHz Centered @ IF, No ripple above -40 dBc	-40.8 dBc	
20	Phase Response	Linear within $\pm 10^\circ$ over 14 MHz range @ IF	$\pm 2.58^\circ$	
21	Differential Phase	Ch A and Ch B within $\pm 3^\circ$ over 14 MHz range centered @ IF	$\pm 2.28^\circ$	
22	Rise Time	160 ns Max (40 dB below peak to 3 dB above peak)	36 ns	
23	Fall Time	160 ns Max (3 dB below peak to 40 dB below peak)	40 ns	
Power Supplies				
24	Power Supplies	+15V	+15V @ 217mA	



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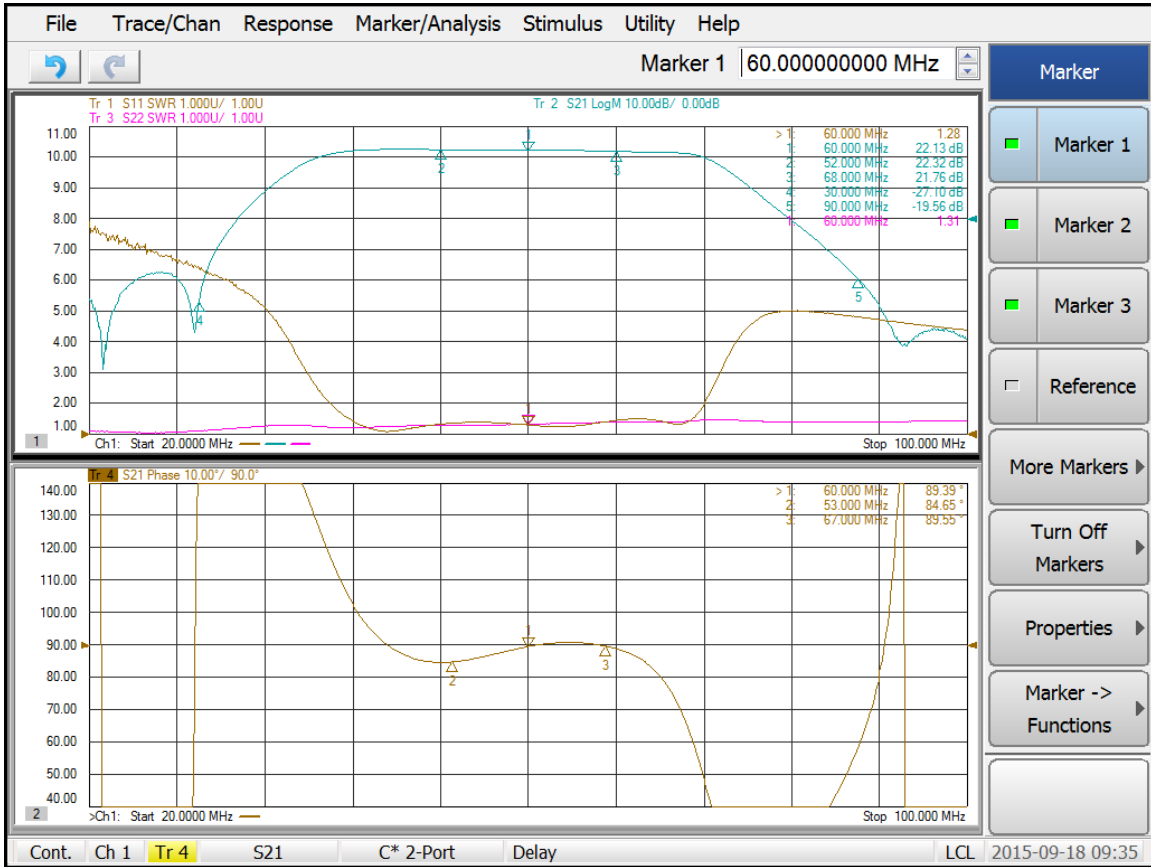
A1 Channel Gain, Rejection, VSWR, and Phase Linearity:





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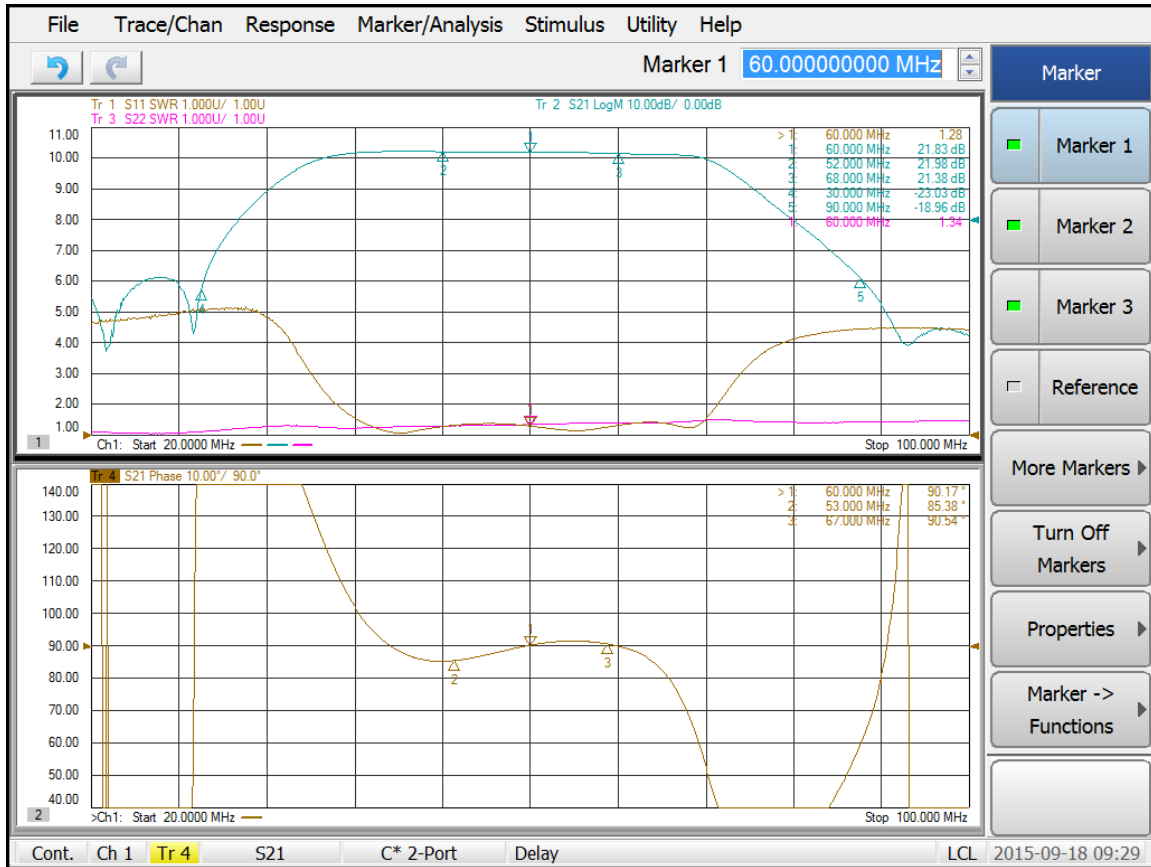
B1 Channel Gain, Rejection, VSWR, and Phase Linearity:





TYPICAL CHARACTERISTICS ON PMOD-IFCPL-60M-AMP-3U

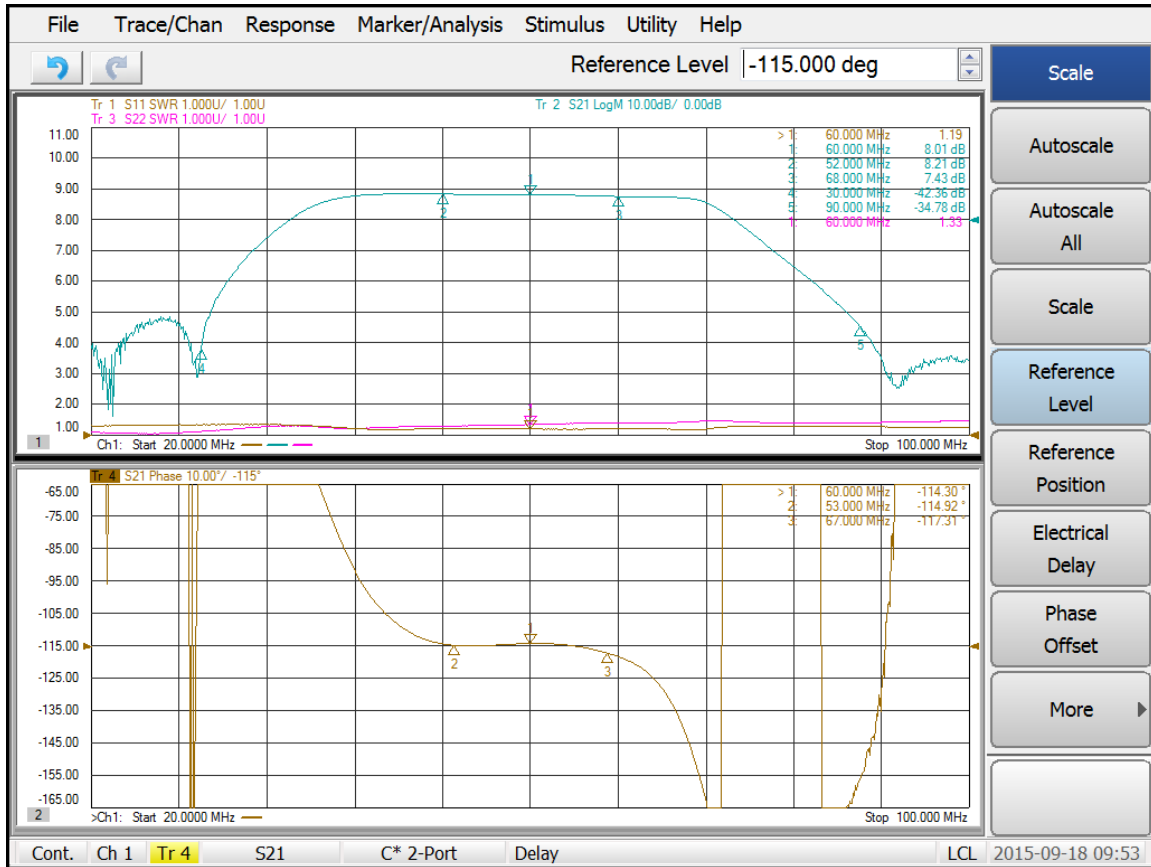
Ω Channel Gain, Rejection, VSWR, and Phase Linearity:





TYPICAL CHARACTERISTICS ON PMOD-IFCPL-60M-AMP-3U

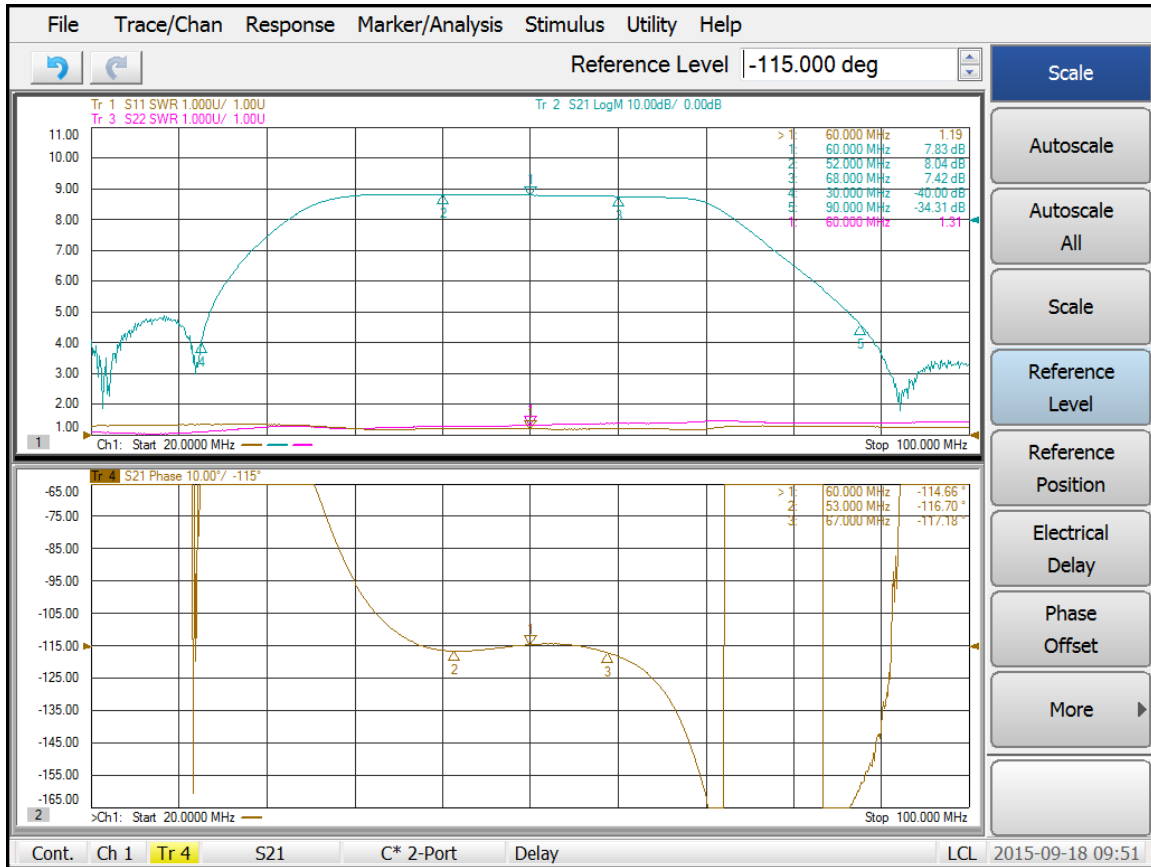
IF Channel to A1 Output:





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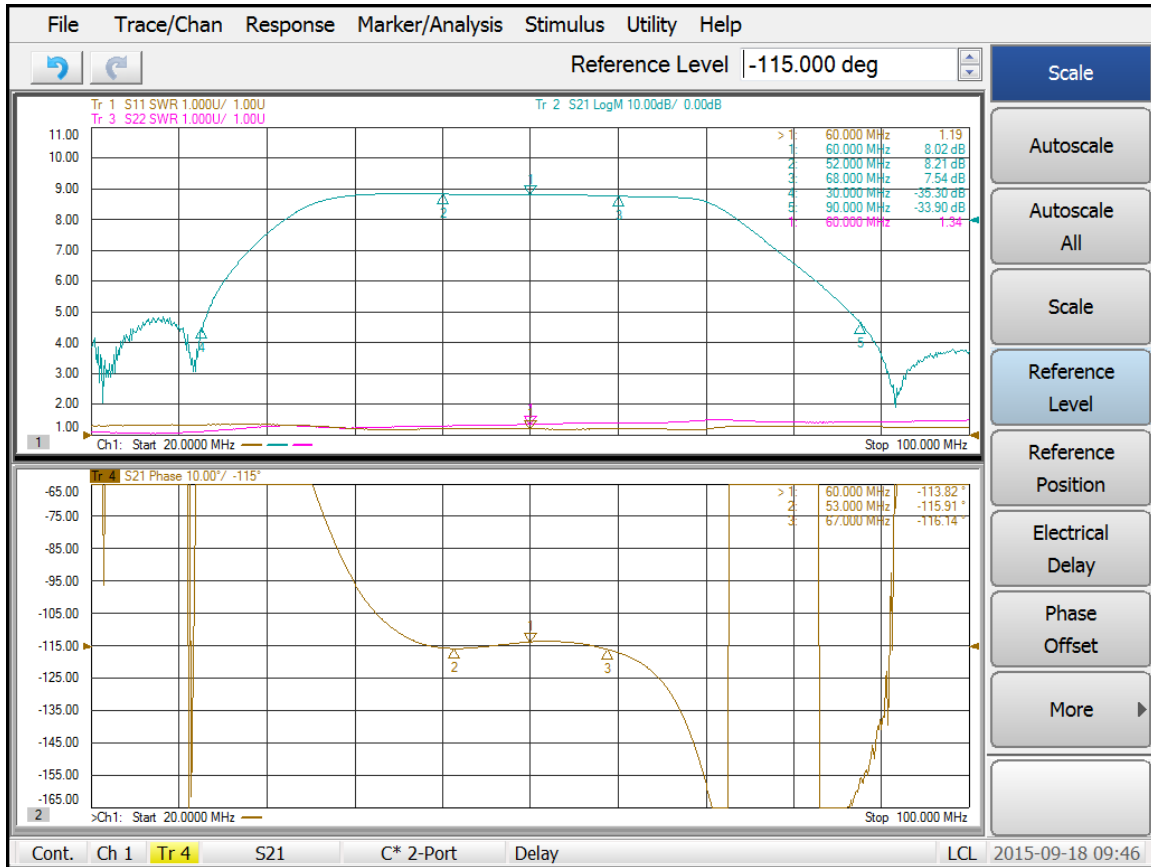
IF Channel to B1 Output:





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IF Channel to Ω Output:

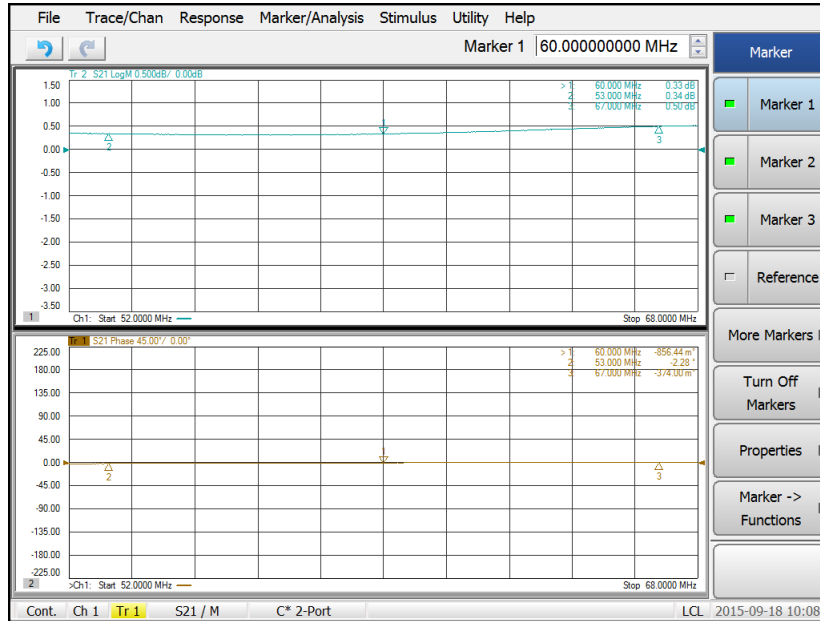




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Amplitude and Phase Balance (Relative to Channel A1):

B1 Channel



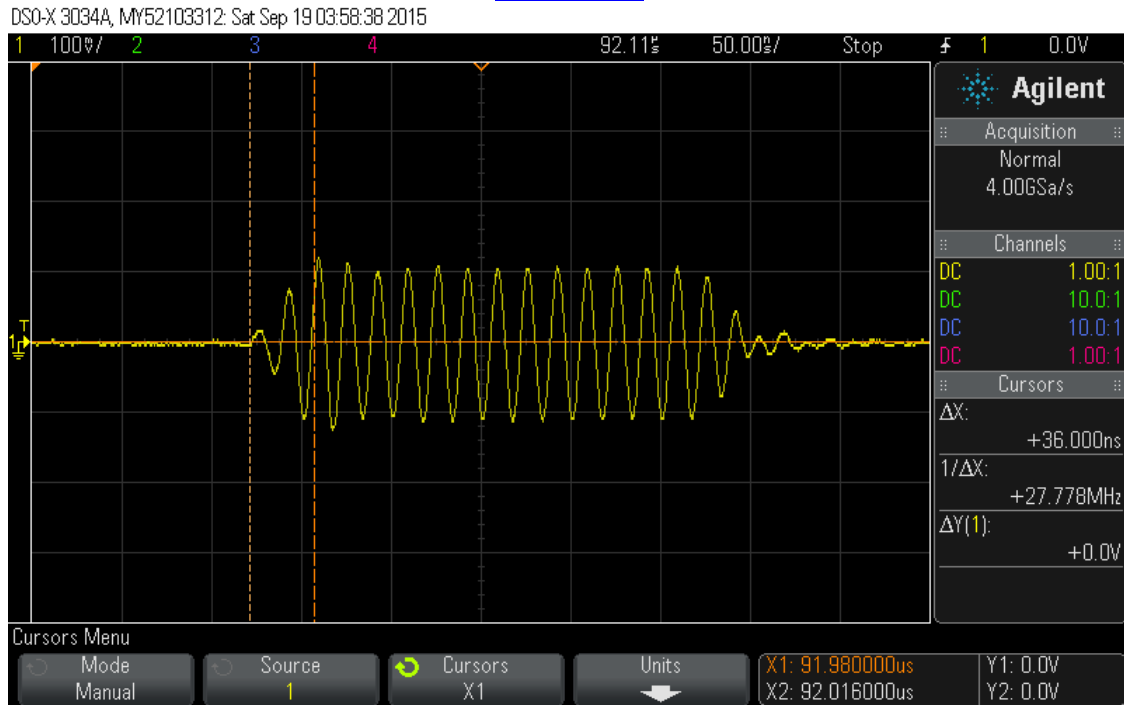
Ω Channel



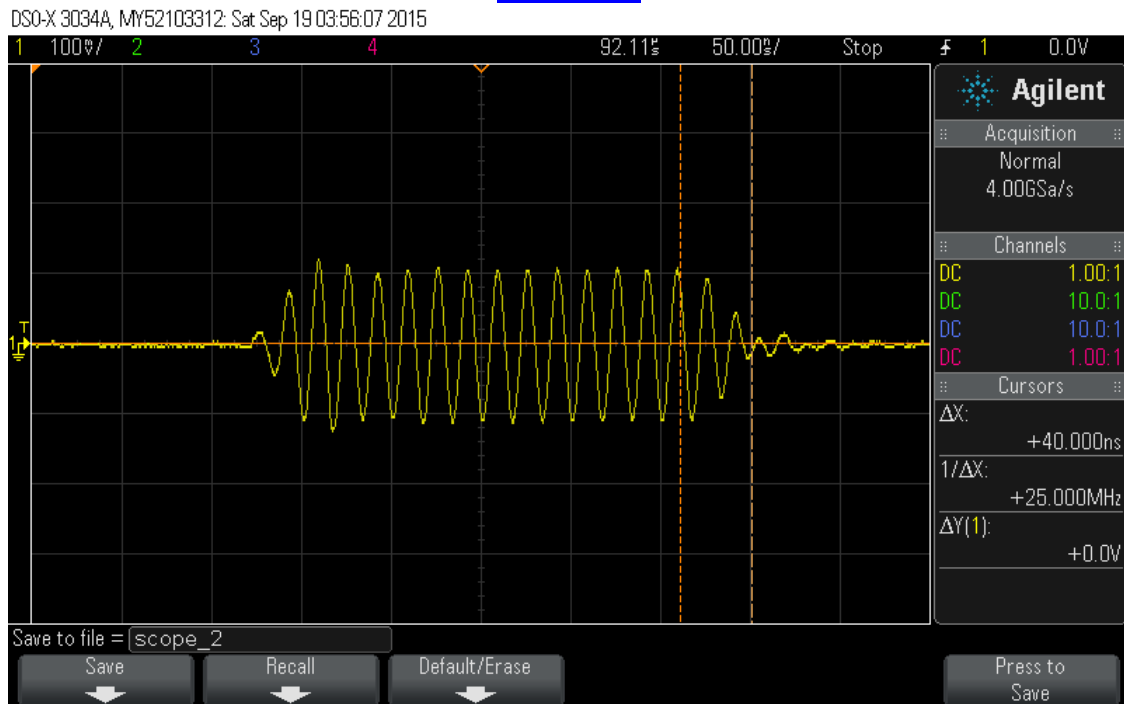


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Rise Time:



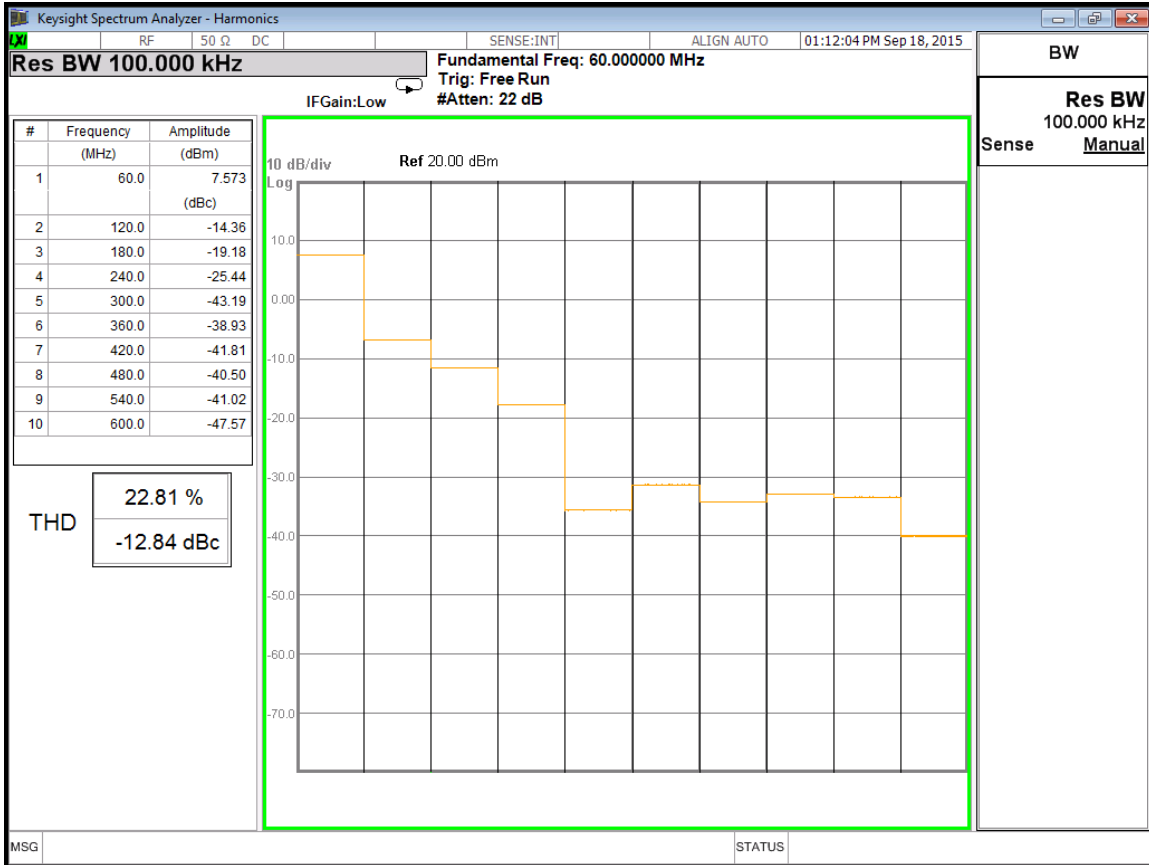
Fall Time:





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Harmonic Distortion at -11 dBm Input Power:





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Input P1dB:

A1 Channel (60 MHz)	B1 Channel (60 MHz)	Ω Channel (60 MHz)
-14.36 dBm	-14.75 dBm	-14.30 dBm